

REMARKS

Claims 1-88 are pending herein. Claims 89-102 are withdrawn from consideration. Claims 39-40, 52-53, 64-65, and 83-84 are amended to remove the optional language as suggested.

1. Claims 1, 37-38, 40-41, 44-46, 50-51, 53-54, 56-57, 62-63, 65, and 85-87 were rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Savvides et al (WO 02-095084 as evidenced by US 2004/0168636). This rejection is respectfully traversed for the following reasons.

The presently claim invention is directed to a method of depositing a biaxially textured film on a substrate. Significantly, depositing occurs with a deposition flux at an oblique incident angle while simultaneously bombarding the film using an ion beam. Additionally, the deposition flux incident plane is arranged parallel to a direction along which the film has the fastest in-plane growth rate. The deposition flux incident plane is the plane defined by the substrate normal and the direction of the deposition flux. See paragraph 0034 of the present application. Significantly, the oblique incident angle, such as between 5° and 80° from the substrate normal, of the deposition flux helps achieve faster texture evolution and results in a better film texture.

Turning to the cited prior art, Savvides et al. discloses dual ion beam assisted deposition. Referring to any of FIGs. 3, 5, and 6, the deposition flux is along a direction that is perpendicular to the plane of the substrate and along the substrate normal, rather than at an oblique angle as claimed. Further, absent an oblique angle, no deposition flux incident plane is defined. Therefore, Savvides et al. do not disclose or remotely suggest that the deposition flux is at an oblique incident angle or that the deposition flux incident plane is arranged parallel to a direction along which the film has the fastest in-plane growth rate. As such, Savvides et al. fails to disclose or suggest each and every aspect of the presently claimed invention. Accordingly, withdrawal of the rejection is respectfully requested.

2. Claims 2-36, 39, 42-43, 47-49,52, 55, 58-61, and 64 were rejected under 35 U.S.C. 103(a) as obvious over Savvides et al. Claims 2-36, 39, 42-43, 47-49,52, 55, 58-61, and 64 depend directly or indirectly from now allowable independent claims 1, 41, and 54. As such, claims 2-36, 39, 42-43, 47-49,52, 55, 58-61, and 64 are allowable for at least the same reasons as claims 1, 41, and 54. Accordingly, withdrawal of the Section 103(a) rejection is respectfully requested.

3. Claims 66-84, and 88 were rejected under 35 U.S.C 103(a) as obvious over Savvides et al. in view of Reade et al. (US 6,321,338). This rejection is respectfully traversed for at least the following reasons.

Claim 66 requires that the deposition flux is at an oblique incident angle. As discussed above Savvides et al. fail to teach or suggest depositing a film with a deposition flux at an oblique incident angle. Reade et al. discloses contact a film with an oblique ion beam to cause the film to become biaxially textured. Specifically, the ion beam contacts the film after the film is formed and the process is fundamentally different from the process disclosed by Savvides et al. See Reade et al. at col. 3, lines 33-43 and lines 57-64. Further, Reade et al. fail to disclose or suggest depositing the film with a deposition flux at an oblique incident angle. Accordingly, Savvides et al. and Reade et al., alone or in combination, fail to teach, suggest, or provide motivation for depositing a film with a deposition flux at an oblique incident angle. Accordingly, withdrawal of the Section 103(a) rejection is respectfully requested.


Applicant(s) respectfully submit that the present application is now in condition for allowance. Accordingly, the Examiner is requested to issue a Notice of Allowance for all pending claims.

Should the Examiner deem that any further action by the Applicants would be desirable for placing this application in even better condition for issue, the Examiner is requested to telephone Applicants' undersigned representative at the number listed below.

Applicant(s) does not believe that any additional fees are due, but if the Commissioner believes additional fees are due, the Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 50-3797.

Respectfully submitted,

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